

10/531,252

(FILE 'HOME' ENTERED AT 13:00:20 ON 10 NOV 2007)

FILE 'CAPLUS' ENTERED AT 13:03:48 ON 10 NOV 2007

=> s reduction of palladium

332043 REDUCTION

172232 PALLADIUM

L1 728 REDUCTION OF PALLADIUM  
(REDUCTION(1W) PALLADIUM)

=> s 11 and propylene

192172 PROPYLENE

L2 4 L1 AND PROPYLENE

=> d 1-4 bib abs

L2 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:794351 CAPLUS

DN 137:295352

TI Method and solution-suspended particulate palladium catalyst for the manufacture of acrylic or methacrylic acids via the oxidation of propylene or isobutylene

IN Unruh, Jerry D.; Diaz, Norma Jean; Molina, Robert Ray; Snyder, Phillip Sidney; Windhorst, Kenneth Allen

PA USA

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002151747	A1	20021017	US 2001-833945	20010412
	CA 2412307	A1	20021024	CA 2002-2412307	20020411
	WO 2002083299	A2	20021024	WO 2002-US11386	20020411
	WO 2002083299	A3	20030227		
	W: AU, BR, CA, CN, CZ, ID, IN, JP, KR, MX, SG, US, ZA RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	AU 2002258767	A1	20021028	AU 2002-258767	20020411
	BR 2002004827	A	20030617	BR 2002-4827	20020411
	EP 1377372	A2	20040107	EP 2002-728734	20020411
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2004519326	T	20040702	JP 2002-581095	20020411
	IN 2002KN01506	A	20040717	IN 2002-KN1506	20021210
	ZA 2002010038	A	20031211	ZA 2002-10038	20021211
	MX 2002PA12317	A	20040906	MX 2002-PA12317	20021211
	US 2004181082	A1	20040916	US 2003-415714	20030919
PRAI	US 2001-833945	A	20010412		
	WO 2002-US11386	W	20020411		

AB A method for the manufacture of acrylic acid or methacrylic acid by the oxidation

of propylene or isobutylene is achieved by: (a) reducing palladium acetate to unsupported palladium with propylene in an oxygen-free single- or two-phase aqueous solution containing as a co-solvent a maximum

concentration of a C2-C6 carboxylic acid or C3-C6 ketone in a reactor adapted for

continuous-phase production; (b) adding air and propylene or isobutylene in a continuous manner; (c) recovering the acrylic acid or methacrylic acid formed; and (d) recycling the solvent to the reactor.

L2 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:197562 CAPLUS  
DN 122:16036  
TI The performance of Pd, Pt, and Pd-Pt catalysts in lean exhaust  
AU Beck, Donald D.; Monroe, David R.; DiMaggio, Craig L.; Sommers, John W.  
CS General Motors Research, USA  
SO Society of Automotive Engineers, [Special Publication] SP (1993),  
SP-957(U.S. and European Automotive Emissions Technology), 71-83  
CODEN: SAESA2; ISSN: 0099-5908  
DT Journal  
LA English  
AB A matrix of pelleted catalysts composed of Pt, Pd, Pt co-impregnated with  
Pd, and Pt phys. mixed with Pd supported on Al<sub>2</sub>O<sub>3</sub> were compared with the  
same noble metal formulations supported on CeO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> for light-off and  
warmed-up performance in net lean exhaust. These catalysts were tested as  
prepared (fresh) and following a relatively severe thermal aging treatment  
(cycled between net lean and net rich environment at 1000°C for 4  
h). Pd showed better light-off performance than Pt for catalyzing the  
oxidation of propylene, while Pt showed better light-off and  
warmed-up performance than Pd for catalyzing the oxidation of propane.  
Having both Pt and Pd present as a result of co-impregnation or phys.  
mixture results in good light-off and warmed-up performance for the  
conversion of both types of hydrocarbons. The presence of CeO<sub>2</sub> generally  
decreases light-off performance for most of these catalysts.

L2 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1990:422873 CAPLUS  
DN 113:22873  
TI Homogeneous catalytic reduction of nitric oxide by olefins in the presence  
of palladium(II) chloride  
AU Cheng, C. H.; Sun, K. S.  
CS Dep. Chem., Natl. Tsing Hua Univ., Hsinchu, 30043, Taiwan  
SO Inorganic Chemistry (1990), 29(13), 2547-8  
CODEN: INOCAJ; ISSN: 0020-1669  
DT Journal  
LA English  
AB An aqueous solution of PdCl<sub>2</sub> and CuCl<sub>2</sub> catalyzes the reaction of NO with  
terminal  
olefins to give N<sub>2</sub>O and the corresponding 2-ketone or aldehyde. The rate  
of catalysis at ambient temperature corresponds to 0.384, 0.255, 0.298, 0.190  
turnovers/h per Pd ion based on N<sub>2</sub>O produced for ethylene,  
propylene, 1-butene, and 1-hexene, resp. PdCl<sub>2</sub> alone in a  
DMSO-H<sub>2</sub>O (9:1, volume/volume) mixture is also an effective catalyst for the  
reduction of NO by terminal olefins. The observed catalysis is inhibited by  
Cl<sup>-</sup>  
and by H<sup>+</sup>.

L2 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1985:112790 CAPLUS  
DN 102:112790  
TI Studies on the reactivity of allylic compounds catalyzed by a palladium[0]  
complex - the effect of leaving groups  
AU Huang, Jiling; Li, Bihua; Lu, Xiyan  
CS Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, Peop. Rep. China  
SO Kexue Tongbao (Foreign Language Edition) (1984), 29(8), 1038-41  
CODEN: KHTPBU; ISSN: 0454-0948  
DT Journal  
LA English  
AB The effect of leaving groups X were determined in the reaction of the  
RCH:CHCH<sub>2</sub>X [X = OAc, O<sub>2</sub>C<sub>2</sub>Et, OP(O)(OCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>, OPh, Br, NH<sub>2</sub>, NHC(S)NH<sub>2</sub>,  
etc.; R = e.g., H] with BH<sub>4</sub>, catalyzed by Pd(PPh<sub>3</sub>)<sub>4</sub>, to give  
propylene. The best leaving group was OAc.

=> s palladium carbide  
172232 PALLADIUM  
219213 CARBIDE  
L3 97 PALLADIUM CARBIDE  
(PALLADIUM(W) CARBIDE)

=> s 13 and propylene  
192172 PROPYLENE  
L4 1 L3 AND PROPYLENE

=> d bib abs

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:352170 CAPLUS  
DN 129:54753  
TI Primary hydroxy-modified fluoropolyethers with narrow molecular weight distribution and their manufacture  
IN Tsuji, Makoto; Nanbu, Hiromi  
PA Kao Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10147639	A	19980602	JP 1996-310406	19961121
PRAI	JP 1996-310406		19961121		
OS	MARPAT 129:54753				

AB The fluoropolyethers represent HO(AO)<sub>n</sub>R1 [R1 = H, (un)substituted C1-30 hydrocarbyl, alkylsilyl, acyl; A = ethylene, propylene, CH<sub>2</sub>C(CF<sub>3</sub>)H; n = 5-2000] wherein A groups may be same or different and contain  $\geq 5$  CH<sub>2</sub>C(CF<sub>3</sub>)H. The fluoropolyethers are manufactured by (1) random or block polymerizing trifluoropropylene oxide (I) with ethylene oxide and/or propylene oxide in the presence of only R<sub>2</sub>OH metal alkoxides [R<sub>2</sub> = CR<sub>a</sub>R<sub>b</sub>R<sub>c</sub>, p-R<sub>d</sub>C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>; R<sub>a</sub>, R<sub>b</sub>, R<sub>c</sub> = C<sub>1</sub>-10 alkyl, (alkyl)phenyl, benzyl; R<sub>d</sub> = H, C<sub>1</sub>-10 alkyl, alkoxy] or R<sub>2</sub>OH and alkali metal hydroxides or alkali metal alkoxides, (2) stopping the polymerization using

terminators, and (3) decomposing initiation end groups with acids or reductants. Thus, I was polymerized in the presence of BuOH at  $\leq 40^\circ$  for 3 h, reacted with 1N HCl, and reacted with chlorosulfonic acid for 12 h to give 89% HO[CH<sub>2</sub>CH(CF<sub>3</sub>)O]<sub>n</sub>H (n = 12 on the average) showing M<sub>w</sub>/M<sub>n</sub> 1.1 and M<sub>n</sub> 1.9 + 103.

=> s 13 and reduction  
332043 REDUCTION  
L5 2 L3 AND REDUCTION

=> d 1-2 bib abs

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:1000392 CAPLUS  
DN 124:100540  
TI Effect of oxygen implantation on the electrochemical properties of palladium  
AU Fujihana, Takanobu; Ueshima, Masato; Takahashi, Katsuo; Iwaki, Masaya  
CS Advanced Technology Inc., Kanagawa, 245, Japan  
SO Materials Research Society Symposium Proceedings (1995), 354 (Beam-Solid Interactions for Materials Synthesis and Characterization), 287-92  
CODEN: MRSPDH; ISSN: 0272-9172  
PB Materials Research Society  
DT Journal

LA English  
AB The electrochem. properties of O+-implanted Pd measured by cyclic voltammetry in a 0.25 mol dm<sup>-3</sup> H<sub>2</sub>SO<sub>4</sub> solution were studied in relation to their composition and structure. Implantation of 160+ was performed with doses between 10<sup>17</sup> and 10<sup>18</sup> ions cm<sup>-2</sup> at 150 keV, and at nearly room temperature SIMS, ERD combined with RBS, and XRD were used to analyze the composition depth profile and structure of O+-implanted Pd surface layers. The H atoms were accumulated with a Gaussian distribution and carbon materials containing the solid solution of PdCx (x = 0.13-0.15) were also formed in the near surface layers during O+-implantation. The distribution of implanted oxygen changed from Gaussian to trapezoidal as the dose increased, accompanied by the crystal growth of Pd(OH)<sub>2</sub>, and simultaneously, the amount of accumulated H atoms increased. The voltammetric measurements revealed that with an increase in the dose, the hydrogen absorption was suppressed at the early stage of sweep cycles, and at the final stage, the redox reaction of both hydrogen and Pd was activated. Probably the carbon materials containing the PdCx formed during O+-implantation suppress the hydrogen absorption, and the metallic Pd like a Pd-black formed by the reduction of Pd(OH)<sub>2</sub> during voltammetric measurements causes the electrochem. activation of O+-implanted Pd.

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1990:216185 CAPLUS  
DN 112:216185  
TI Rhodium(I)- or ruthenium(II)-catalyzed direct coupling of vinyl ketones with aldehydes and the subsequent reduction to give aldol derivatives anti-selectively  
AU Sato, Susumu; Matsuda, Isamu; Shibata, Masahiro  
CS Fac. Eng., Nagoya Univ., Nagoya, 464-01, Japan  
SO Journal of Organometallic Chemistry (1989), 377(2-3), 347-56  
CODEN: JORCAI; ISSN: 0022-328X  
DT Journal  
LA English  
OS CASREACT 112:216185  
AB A vinyl ketone reacts with an aldehyde to give an  $\alpha$ -methylene- $\beta$ -hydroxyalkanone with the concomitant formation of the vinyl ketone dimer in the presence of catalytic amount of RhH(PPh<sub>3</sub>)<sub>4</sub> or RuH<sub>2</sub>(PPh<sub>3</sub>)<sub>4</sub> under almost neutral conditions. The selectivity of the cross-coupling product is remarkably improved in the presence of an extra mole of aldehyde. This type of cross-coupling is explained by the intermediacy of the transition-metal enolate, which is formed by the Michael-type addition of M-H to a vinyl ketone. The subsequent hydrogenation of the C-C double bond of the  $\alpha$ -methylene- $\beta$ -hydroxyalkanone proceeds readily to give aldol derivs. in the presence of the catalyst. [Rh(COD)(DPPB)]PF<sub>6</sub>, [COD = 1,5-cyclooctadiene, DPPB = 1,4-bis(diphenylphosphino)butane] is the best choice of catalyst and gives aldol derivs. anti-selectively.

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=> d his

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FILE 'CAPLUS' ENTERED AT 13:03:48 ON 10 NOV 2007

L1 728 S REDUCTION OF PALLADIUM  
L2 4 S L1 AND PROPYLENE  
L3 97 S PALLADIUM CARBIDE  
L4 1 S L3 AND PROPYLENE  
L5 2 S L3 AND REDUCTION

FILE 'REGISTRY' ENTERED AT 13:08:06 ON 10 NOV 2007

=> s pdc0.16/mf  
L6 0 PDC0.16/MF

=> s pdc.16/mf  
L7 0 PDC.16/MF

=> s pd1c.16/mf  
L8 0 PD1C.16/MF

=> s pd1c.85/mf  
L9 0 PD1C.85/MF